Dr. Jeffrey W. Runge
Administrator
National Highway Traffic Safety Administration
400 Seventh Street SW
Washington, DC. 20590
Phone # (202) 366-1836
Fax # (202) 366-2106 (13 pages total)

24836 0

Petition

Title 49 CFR 571.205
Standard No. 205 Glazing materials.

NHTSA-03-14345-9

Request:

Rulemaking for a safety tempered glazing fracture test specification and acceptance criteria as part of the standard for glazing material with conductors per ANSI 1996.

Basis:

A procedure is needed for NHTSA to do compliance verification testing of safety tempered glazing with conductors that is consistent with the legal interpretations of it's requirements.

Summary:

There is not a compliance testing procedure in either ANSI or NHTSA for safety tempered glazing with conductors that represents the recent legal interpretations of NHTSA having two specific acceptance criteria.

The first criteria is that the weight of the terminal is subtracted from the weight of the attached collection of broken glass fragments after the fracture test to determine it's compliance for the required certification of having less than the ANSI 4.25g. maximum glass fragment weight.

The second criteria is if the weight of the terminal and the attached collection of broken glass fragments exceed 4.25g. it would be a violation of Sec. 30122 "Making safety devices or elements of a design inoperative".

Background:

I had requested legal interpretations from NHTSA's Office of Chief Counsel on two occasions. This was done to clarify the existing requirements of ANSI 1980 that is to be consolidated when the ANSI 1996 is incorporated by reference as proposed August 4th, 1999.

The first request for legal interpretation was specific to glazing with conductors and the soldering process used to attach electrical terminals to the silver paint artwork on the glazing. Specifically if the soldering process caused localized annealing of the safety tempered glass that prevented it from fracturing into individual broken glass fragments weighing less than the 4.25g. maximum size limit.

In NHTSA's November 26th 2002 legal interpretation (A) and subsequent phone conversation with Nancy Bell, Office of Chief Counsel. That, under the existing ANSI 1980 statue, this condition would be a violation of Sec. 30122 "Making safety devices or elements of a design inoperative". However, when the ANSI 1996 is incorporated by reference, the manufacturers would be required to certify that glazing materials with conductors that may have localized annealing from a heating/cooling process would not produce any individual glass fragment weighing more than 4.25 g. (0.15 oz.) in a fracture test. This would then become a false certification issue if the part failed to pass NHTSA's compliance verification testing procedure with additional criminal law violations.

Based on this we evaluated and documented a fracture test procedure for safety tempered glazing with conductors (B). This procedure subtracted the weight of the attached terminal from the collection of broken glass to evaluate only the weight of the broken glass. Having a maximum weight limit of 4.25g. per the ANSI specifications. This was reviewed with John Lee, Office of Crashworthiness Standards and Luis Figueroa, Office of Compliance Testing. Both agreed that the ANSI specifications were specific to the weight of the collection of broken glass fragments being attached to the terminal. Therefore it is appropriate to subtract the weight of the terminal in order to determine the broken glass fragment's compliance with ANSI's specifications.

The second request for legal interpretation was specific to the glazing with conductors and the effect of the electrical terminal attached to the silver paint artwork. Specifically if the size of the attached terminal caused the collection of broken glass fragments to exceed the 4.25g.maximum size limit.

In NHTSA's faxed February 6th 2003 legal interpretation (C) and subsequent fax/phone conversation February 19th with Nancy Bell (D). This condition would be a violation of Sec. 30122 "Making safety devices or elements of a design inoperative". Because of the electrical terminal being attached to and being part of the collection of broken glass fragments. Per this conversation, I had seven reasons why Nancy Bell is correct (E). I reviewed this with John Lee and Luis Figueroa who also agreed. However, as of April 21st 2003, neither John or Luis knew of anyone working on a NHTSA compliance verification testing specification and acceptance criteria. Even though the Final Rule that requires it is eminent.

Justification:

The automotive industry and it's representatives on the ANSI committee have not addressed this issue since it's inception, let alone since they specified the testing of safety tempered glazing with conductors in 1996. It appears that no one within the industry wants to constrain the design of their products. Therefore, it will require a compliance testing procedure and acceptance criteria directly from NHTSA.

With the legal interpretations of the requirements being made by NHTSA, the legal documentation of a compliance testing procedure and acceptance criteria need to be addressed in rulemaking. Otherwise NHTSA's legal interpretations will be the subject of additional interpretations in the state and federal courts when the parts are found not to be in compliance with a retroactively developed compliance testing procedure.

The scope of the problem is difficult to determine at this time as those in the industry are making multimillion dollar confidential settlements for safety glazing personal injuries (F). From an initial statistical snap shot, the finding of an appellate court decision of only one firm having over fifty confidential settlements indicates there is the potential for this issue to be a significant problem. The confidential settlement aspect should be resolved by the TREAD Act's historical and ongoing reporting to permit a more accurate identification of the problem and a prioritization of NHTSA's and the industries resources to address it.

Larry J. Costa
April 22, 2003

Costa Technologies
55613 Currant Rd.
Mishawaka, IN. 46545
Phone 574-257-8797
Fax 574-257-8097

Exhibits

A NHTSA's November 26th 2002 legal interpretation, 3 pages.
B Determining the Broken Glass Fragment Weight for Safety Tempered Glass with Conductors.
C NHTSA's faxed February 6th 2003 legal interpretation, 3 pages.
D Fax and phone conversation with Nancy Bell 2/19/03.
E Is the weight of the conductive terminal included with the attached broken glass fragment?
F Multimillion dollar confidential settlement for safety glazing personal injury.

U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

NOV 26 2002

400 Seventh Street, S.W.
Washington, D.C. 20590

Mr. Larry J. Costa
55613 Currant Rd.
Mishawaka, IN 46545

Dear Mr. Costa:

This responds to your letter in which you ask that we provide a response to the following four questions:

1) Would broken safety tempered glass fragments being larger than the FMVSS 571.205 size limit that are caused by the annealing of soldering on safety tempered glass, be a violation of Federal Motor Vehicle Safety Statutes?

2) What would be the applicable statutes defining the violation, it's remedies and penalties?

3) Who would be responsible for the violation of these Federal Motor Vehicle Safety Statutes on new vehicles?

4) Who would be responsible for the violation of these Federal Motor Vehicle Safety Statutes on vehicles being repaired?

Your questions are addressed below.

By way of background information, the National Highway Traffic Safety Administration (NHTSA) has the authority to issue Federal motor vehicle safety standards (FMVSSs) applicable to new motor vehicles and new items of motor vehicle equipment. Federal law establishes a self-certification system under which motor vehicle and equipment manufacturers themselves certify that their products comply with all applicable standards. For that reason, NHTSA neither endorses, approves, nor conducts testing of products prior to their introduction into the retail market. Rather, we enforce compliance with the standards by purchasing vehicles and equipment and testing them. We also investigate safety-related defects.

Pursuant to NHTSA's authority, the agency has established FMVSS No. 205, Glazing Materials (49 CFR 571.205), which specifies performance requirements for

various types of glazing (called "items"), and specifies the locations in vehicles in which each item of glazing may be used. The standard also incorporates by reference the commercial standard American National Standard Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways - Standard ANSI Z26.1-1977 (ANSI Z26.1-1977) as supplemented by Z26.1a-1980 (hereinafter referred to as "ANS Z26").

In ANS Z26, Section 5.7 "Fracture, Test No. 7" limits the size of individual glass fragments that form as a result of impact to a glazing surface and requires that no individual glass fragment weigh more than 4.25 g (0.15 oz.). This current test does not require that its procedure be conducted with the electrical terminals attached to the glazing material's conductors and soldered by processes that represent the manufacturer's production and rework processes. Therefore, glazing which complies with the fragment size requirement of Test No. 7 prior to any soldering processes is presently compliant with this particular aspect of the FMVSS No. 205.

NHTSA published a Notice of Proposed Rulemaking (NPRM) on August 4, 1999 (64 FR 42330), to amend FMVSS No. 205 so that it incorporates by reference the October 1996 version of ANS Z26, the industry standard on motor vehicle glazing. Currently, the Federal standard incorporates the 1977 version. Section 5.7 "Fracture, Test 7" of the October 1996 version requires that no individual glass fragment weigh more than 4.25 g (0.15 oz.) as in the current ANS Z26. However, it further requires that specimens: 1) be selected from a range of glazing that a manufacturer produces or plans to produce; and 2) be of the most difficult part or pattern designation within the model number. Further, in selecting the specimens, thickness, color and conductors must be considered. Therefore, should we incorporate the 1996 version as proposed, manufacturers would be required to certify that glazing materials with conductors that may have localized annealing from a heating/cooling process would not produce any individual glass fragment weighing more than 4.25 g (0.15 oz.) in a fracture test. A final decision on that rulemaking is expected soon.

49 U.S.C. § 30112 (copy enclosed) (formerly § 108(a)(1)(A) of the National Traffic and Motor Vehicle Safety Act [1]) provides that no person shall "manufacture for sale, sell, offer for sale, or introduce or deliver for introduction into interstate commerce, or import into the United States" any item of new motor vehicle equipment unless the equipment complies with all applicable safety standards and is so certified by its manufacturer. It would be a violation of this section of Federal law for any person to manufacture or sell any glazing material for use in motor vehicles unless the products comply with applicable requirements of Standard No. 205. Further, it would be a violation of Federal law for any person to manufacture or sell a motor vehicle whose glazing does not comply with the performance and location requirements of Standard No. 205.

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[1] Our statute, formerly the National Traffic and Motor Vehicle Safety Act, was recodified in 1994 without substantive change. It is now codified at Title 49 of the U.S. Code in Chapter 301, Motor Vehicle Safety.)

In addition, 49 U.S.C. §30122 provides that a manufacturer, distributor, dealer, or vehicle repair business may not knowingly "make inoperative" any device or element of design installed on or in a motor vehicle in accordance with any FMVSS. Glazing material could only be installed by the aforementioned entities if it meets the performance and location requirements of FMVSS No. 205.

A person that violates any of the aforementioned requirements is liable for a civil penalty of not more than $5,000 for each violation. A separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform an act required by any of those sections.

Manufacturers of motor vehicle equipment are also subject to the requirements of 49 U.S.C. §§30118-30120, which set forth the notification and remedy procedures for products with defects related to motor vehicle safety. Thus, if NHTSA or the manufacturer determines that the product contains a safety-related defect, the manufacturer is responsible for notifying purchasers of the defective equipment and for remedying the problem free of charge. This responsibility is borne by the vehicle manufacturer in cases in which the product is installed on a new vehicle by or with the express authorization of that vehicle manufacturer.

For your further information, I am enclosing a fact sheet we prepared entitled *Information for New Manufacturers of Motor Vehicles and Motor Vehicle Equipment, and Where to Obtain NHTSA's Safety Standards and Regulations.*

I hope this information is helpful. If you have any questions or need additional information, feel free to contact Nancy Bell of my staff at this address or at (202) 366-2992.

Sincerely,

Jacqueline Glassman
Chief Counsel

Enclosures

Exhibit A page 3 of 3

Determining the Broken Glass Fragment Weight for Safety Tempered Glass with Conductors

1. Determine the average weight of the conductor's terminal.
   - A. Weigh a number of individual terminals taking the total weight and divide by that number individual terminals for an average terminal weight.
   - B. For example, ten terminals equal 17.0 grams divided by 10 equals an average weight of 1.7g. per terminal.

2. Attach the terminal to the safety tempered glass's conductor.
   - A. Use a conductive adhesive per the manufacturers recommendation and allow to cure.
   - B. Use a soldering system per the manufacturers recommendation and allow to cool.
   - C. Attach string to the terminal(s) for it's retrieval.

3. Break the glass per ANSI Z26.1 Fracture Test # 7.
   - A. Wait 3 minutes per the test's procedure.
   - B. Retrieve the terminal and remove the string.
   - C. Do not remove any fractured glass fragments from the terminal.

4. Determine the broken glass fragment's weight.
   - A. Obtain the gross weight of the terminal and the attached broken glass fragment(s).
   - B. Subtract the conductor's average terminal weight.
   - C. The remaining net weight is that of the broken glass fragment.

5. Interpretation of results.
   - A. The net weight of the broken glass fragment cannot be more than 4.25g.
   - B. Per NHTSA's legal interpretation of 49 U.S.C. 571.205 "Glazing" and Sec. 30122 "Making safety devices or elements inoperative".

Larry J. Costa
November 26, 2002

Exhibit B

NHTSA

People Saving People

On the Road for a Healthier Future

Office of Chief Counsel

Telefax Transmittal Sheet

Fax Number (202)366-3820

To: Larry Costa

Fax No.: 574-257-8097

Subject: Glazing

From: Nancy Bell

Phone Number: 202-366-2992

Additional Message: Attached letter sent to you on 11/26/02 clearly states that the cited entities are prohibited from selling glazing that does not comply with FMVSS 205.

Pages to Follow Cover Sheet: 4

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Exhibit C page 1 of 3

National Highway Traffic Safety Administration
Office of Chief Counsel
Washington, DC. 20590
202-366-5263
Fax 366-3820

Mr. Taylor Vinson,

This is a request for legal interpretation of Federal Motor Vehicle Safety Statutes 571.205 regarding 49 U.S.C. 30122 for additional conductors being soldered to safety tempered glass that become an attached collection of glass fragments when the glass is broken.

Question :

Would the soldering of additional conductors to safety tempered glass that originally complies with the FMVSS 571.205 glass fracture test by having individual fragments weighting less than 4.25 g (0.15 oz.), be a violation of 49 U.S.C. 30122 ... may not knowingly "make inoperative" any device or element of design installed on or in a motor vehicle in accordance with any FMVSS, when this creates an attached collection of glass fragments weighing more than 4.25 g when the glass is broken?

Issue :

The safety element of design for safety tempered glass is that it fractures into small individual glass fragments weighing less than 4.25 g (0.15 oz.) that minimize the risk for personal injuries. Sometimes, either a flexible braid or copper strip is soldered to the defrost grid's silver paint artwork on the safety tempered glass to increase it's electrical capacity. These supplemental conductors, being up to several feet long, can consist of more than a pound of attached glass fragments when the safety glass is broken. This effectively negates the performance objective of having a maximum fragment size limit for safety tempered glass (0.15 oz. = 0.7 lbs. @ 42 mph) and significantly increases the risk for serious personal injuries (16 oz. = 74 lbs. @ 42 mph).

Additional statute :

Section 576.8 of FMVSS sets forth the meaning of "malfunctions that may be related to motor vehicle safety," which include with respect to a motor vehicle:
* * * any failure or malfunction beyond normal deterioration in use, or any failure of performance, or any flaw or unintended deviation from design specifications, that could in any reasonably foreseeable manner be a causative factor in, or aggravate, an accident or an injury to a person.

Thank you,
Larry J. Costa
January 6th, 2003

Costa Technologies
55613 Currant Rd.
Mishawaka, IN. 46545
574-257-8797 Ext.106
Fax 257-8097

NHTSA published a Notice of Proposed Rulemaking (NPRM) on August 4, 1999 (64 FR 42330), to amend FMVSS No. 205 so that it incorporates by reference the October 1996 version of ANS Z26, the industry standard on motor vehicle glazing. Currently, the Federal standard incorporates the 1977 version. Section 5.7 "Fracture, Test 7" of the October 1996 version requires that no inDIVidual glass fragment weigh more than 4.25 g (0.15 oz.) as in the current ANS Z26. However, it further requires that specimens: 1) be selected from a range of glazing that a manufacturer produces or plans to produce; and 2) be of the most difficult part or pattern designation within the model number. Further, in selecting the specimens, thickness, color and conductors must be considered. Therefore, should we incorporate the 1996 version as proposed, manufacturers would be required to certify that glazing materials with conductors that may have localized annealing from a heating/cooling process would not produce any inDIVidual glass fragment weighing more than 4.25 g (0.15 oz.) in a fracture test. A final decision on that rulemaking is expected soon.

49 U.S.C. ' 30112 (copy enclosed) (formerly ' 108(a)(1)(A) of the National Traffic and Motor Vehicle Safety Act [1]) provides that no person shall Amanufacture for sale, sell, offer for sale, or introduce or deliver for introduction into interstate commerce, or import into the United States@ any item of new motor vehicle equipment unless the equipment complies with all applicable safety standards and is so certified by its manufacturer. It would be a violation of this section of Federal law for any person to manufacture or sell any glazing material for use in motor vehicles unless the products comply with applicable requirements of Standard No. 205. Further, it would be a violation of Federal law for any person to manufacture or sell a motor vehicle whose glazing does not comply with the performance and location requirements of Standard No. 205.

In addition, 49 U.S.C. '30122 provides that a manufacturer, distributor, dealer, or vehicle repair business may not knowingly Amake inoperative@ any device or element of design installed on or in a motor vehicle in accordance with any FMVSS. Glazing material could only be installed by the aforementioned entities if it meets the performance and location requirements of FMVSS No. 205. *

A person that violates any of the aforementioned requirements is liable for a civil penalty of not more than $5,000 for each violation. A separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform an act required by any of those sections.

Manufacturers of motor vehicle equipment are also subject to the requirements of 49 U.S.C. "30118-30120, which set forth the notification and remedy procedures for products with defects related to motor vehicle safety. Thus, if NHTSA or the manufacturer determines that the product contains a safety-related defect, the manufacturer is responsible for notifying purchasers of the defective equipment and for remedying the problem free of charge. This responsibility is borne by the vehicle manufacturer in cases in which the product is installed on a new vehicle by or with the express authorization of that vehicle manufacturer.

For your further information, I am enclosing a fact sheet we prepared entitled *Information for New Manufacturers of Motor Vehicles and Motor Vehicle Equipment, and Where to Obtain NHTSA=s Safety Standards and Regulations*.

I hope this information is helpful. If you have any questions or need additional information, feel free to contact Nancy Bell of my staff at this address or at (202) 366-2992.

Exhibit C page 3 of 3

NHTSA
Office of Chief Counsel
Nancy Bell
202-366-2992
Fax 366-3820

Ms. Nancy Bell,

I am not able to read all of the message on the fax cover sheet that you sent to me on 2/6/03. Is this correct and what is the missing word?

> Attached letter sent to you on 11/26/02 clearly states that the cited __**(entities)**___ are prohibited from selling glazing that does not comply with FMVSS 205.

The 11/26/02 legal interpretation is for the localized annealing from soldering creating individual broken glass fragments that exceed 4.25g. and thereby violate 49 U.S.C. 30122.

The 1/6/03 request for legal interpretation is for a supplemental conductor being soldered to safety tempered glass that creates an attached collection of broken glass fragments. Although the *individual* broken glass fragment could weigh less than the 4.25g if each one was removed from the conductor.

I am asking if a conductor attached to safety tempered glass that creates an attached collection of broken glass fragments would be a violation of 49 U.S.C. 30122 if the weight of the broken glass fragments in total exceeded 4.25g.? **(Yes)**

For example if a conductor and it's attached broken glass fragment weighed 6.0g. minus 2.0g. for the conductor it would have a 4.0g. broken glass fragment and pass the 4.25g.FMVSS. **(No)**

However if a conductor and it's attached broken glass fragment weighed 7.0g. minus 2.0g. for the conductor it would have a 5.0g. broken glass fragment, failing to pass the 4.25g. FMVSS and be in violation of 49 U.S.C. 30122. **(Yes)**

More simply stated, what is NHTSA's legal definition for an "individual" broken glass fragment that the 4.25g. FMVSS applies to? **(Will consider a specific definition.)**

Best personal regards,
Larry J. Costa
February 7th, 2003

Costa Technologies
55613 Currant Road
Mishawaka, IN. 46545
574-257-8797 Ext. 106
Fax 257-8097

(Per phone conversation with Nancy Bell 2/19/03 @ 4:00 P.M.)

Exhibit D

Is the weight of the conductive terminal included with the attached broken glass fragment?

Considerations:
In the 1996 version of the ANSI Z26 specification's # 5.7.2 "Specimens to be Tested" it states "Conductors".

1 The conductive terminals being attached to the conductive silver paint artwork on the glass are the "Conductors".

2 The word "conductors" is for more that one item. To mean the silver paint only, the singular "Conductor" could have been used instead of the plural "Conductors".

3 The specifications are not limited to the silver paint only. If it was to be limited to the silver paint artwork it could have been stated.

The terminal's size and method of attaching it determines the amount of broken glass that is attached to it. This is the fragment that can become a projectile when the safety tempered glass is broken.

4 The weight of the terminal is part of the projectile's mass that is intended to be limited to 4.25g to minimize personal injuries.

5 If the mass of the broken glass fragment and the attached terminal can exceed the 4.25g weight limit. Then a method of terminal retention should be specified to prevent it from becoming a loose projectile.

To not include the weight of the attached terminal in the broken glass fragment's weight for compliance testing.

6 The individual terminal and it's solder or adhesive could be removed from the attached collection of broken glass fragments. If the specified procedures traceable to the National Institute of Standards were to be developed.

7 The actual weight of the individual terminal and it's solder or adhesive prior to attaching to the glass could be subtracted from the weight of the attached broken glass fragment. If the actual terminal and the specific attachment medium could be purchased from that specific terminal manufacturer, for that specific model, that was used at that specific location, on the actual piece of glass that is to be tested. If the terminal manufacturer is known and has the material available.

Exhibit E

Excerpts from the opinion of Circuit No. 95C-1573, Appeal No. M1998-00314-COA-R3-CV

(This appellate court order is not confidential.)

Page 1

This appeal is a dispute between two attorneys over attorney's fees incurred in a contingency fee personal injury and product liability lawsuit.

In September 1994, Richard Johnson was severely injured in an automobile accident.

Cheatham filed suit against Stoney Hunter. In the course of discovery, Cheatham investigated the policy limits of Hunter's insurance carrier. Cheatham found that the policy had a liability limit of only $50,000. Consequently, Cheatham filed a product liability action against General Motors, the maker of Hunter's Camaro; Libbey Owen's Ford, the manufacturer of the T-top glass panels; and Pittsburgh Plate Glass Industries, the manufacturer of the rear window glass. Cheatham had had limited previous experience with product liability cases, so he contacted defendant attorney Patrick M. Ardis of the Wolff Ardis law firm in Memphis. Ardis' law firm specialized in automobile glass cases.

(The "T" top injured Johnson and the buss bars soldered to broken back glass injured Johnson and Hunter.)

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Richard Johnson was still receiving a salary despite his disability. In the letter, Cheatham also explained that when he associated the law firm of Wolff Ardis, a law firm that specialized in glass litigation, he believed that much of their previous work would be relevant to the case:

Cheatham questioned some of the expenses, asserting that some charges benefitted more than one of Ardis' automobile glass cases, and thus should not have been billed entirely to the Johnsons.

(Wolff Ardis has handled more than 50 safety tempered glass product liability cases.)

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On January 9, 1998, the trial court entered an order permitting Cheatham to withdraw from the case. Ardis eventually obtained a settlement on behalf of Richard Johnson totaling $4,332,500. The expenses involved in the case totaled over $800,000. Cheatham sought attorney's fees from the settlement. A hearing was held on September 14 and 15, 1999, before the trial judge who handled the underlying lawsuit and who was familiar with the attorneys' contributions.

(This case settled before trial with a confidential settlement as has others.)

Page 5

Cheatham testified about his contributions to the case, such as: obtaining and examining accident reports and hospital records, contacting an accident reconstructionist, collecting and saving glass samples from the accident, correcting and amending the complaint, responding to requests for admissions and discovery, preparing the Johnsons for depositions, acting as sole attorney in a dozen depositions of key witnesses and emergency personnel, attending the settlement conference, obtaining and preparing documents for the mediation, attending the mediation, and investigating a prior workers' compensation claim filed by Johnson.

Ardis admitted that he owned 99% of one company, Strategic Intelligence Group, which billed the Johnsons for $145,000 of expenses, and that he owned 100% of another company, Legal Vision, which billed the Johnsons for approximately $15,000 of expenses.

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Based on all of these findings, the trial court awarded Cheatham $480,426.50 in attorney's fees, one-third of the total contingency fee. From this order, Ardis now appeals.

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The trial court also noted that at the time of Cheatham's withdrawal from the case, the highest settlement offer that had been proposed was $300,000.

(Comments obtained from Wolff Ardis paralegal personnel Tom Wolff in February 2003.)

Exhibit F